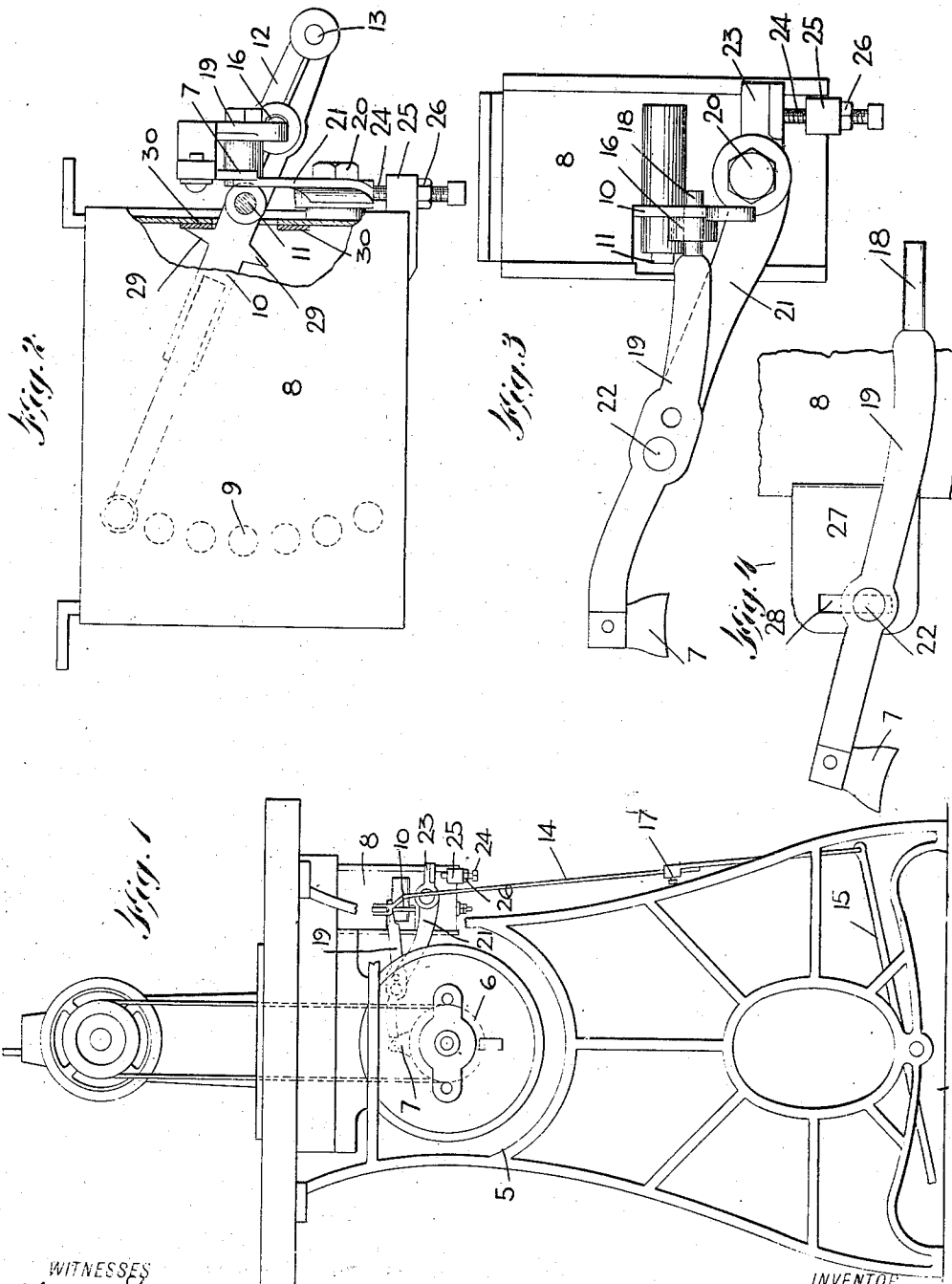


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PULLEY BRAKE FOR MOTOR CONTROLLED APPARATUS,  
APPLICATION FILED APR. 3, 1912.

1,044,944.

Patented Nov. 19, 1912.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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PULLEY-BRAKE FOR MOTOR-CONTROLLED APPARATUS.

1,044,944.

Specification of Letters Patent.

Patented Nov. 19, 1912.

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*To all whom it may concern:*

Be it known that I, MAX TAIGMAN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Pulley-Brake for Motor-Controlled Apparatus, of which the following is a full, clear, and exact description.

My invention relates to the brake mechanism on motor-controlled apparatus, and is particularly adapted for a brake mechanism on a motor-actuated sewing machine.

An object of my invention is to provide a readily actuated brake mechanism for simultaneously manipulating the brake to apply the same when the power is shut off, said mechanism having means for adjusting the support of the brake whereby the wear in the latter may be taken up and the effectiveness of the brake action varied.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a side view in elevation indicating the location of my brake on a sewing machine; Fig. 2 is a front elevation of my brake mechanism with the cover of the casing partially broken away; Fig. 3 is a side elevation of the device looking at the right of Fig. 2, and Fig. 4 is a side elevation of part of the casing showing a modified form of brake lever support.

Referring more particularly to Fig. 1, there is disclosed a sewing machine frame 5, which may be of any suitable character and which may be provided with a drive pulley 6, which is driven directly from the motor or other suitable source of energy.

It is desirable to provide a unitary means for shutting off the current to the motor, and, at the same time, to apply the brake to some of the moving parts of the machine, preferably to the pulley. For that purpose, a brake shoe 7 of any suitable construction is mounted on the frame of the machine so as to bring the shoe into firm engagement with the pulley wheel at the same time that the current is shut off. This brake shoe wears down, and in some cases it is desirable that the shoe should bear on the pulley or other movable part with varying force with different degrees of tension, and

to attain this object the brake shoe should be mounted to vary the extent of movement of the shoe without changing the movement of the device which controls the passage of current to the motor. Preferably, the brake mechanism is mounted upon a casing 8 containing contact plugs 9, through which the current is completed in a manner described in the above identified specification, this specific form of electric contact forming no part of the present case.

Suitably mounted on the side of the casing and extending into the same, is a switch arm 10 pivoted on a cotter pin 11 carried in a journal on the side of the casing, said switch arm having an exteriorly extending portion 12, which portion has an eye 13 in the free end thereof, pivoted to which eye is the upper end of a reach rod 14, the lower end of which rod is suitably pivoted to a treadle 15. The reach rod 14 is preferably in two or more parts connected together by means of a sleeve-and-nut connection 17, so as to adjust the length of the rod. The extended portion 12 has an aperture 16 extending therethrough, loosely mounted in which aperture 16 is the reduced end 18 of the brake lever 19, the opposite end of which has suitably fastened thereto a brake shoe 7. This lever 19 extends substantially at right angles from the switch arm 10. Extending parallel to the lever 19 and fulcrumed to the casing 8 by means of a bolt 20, is a bracket 21 in the form of a lever, one end of which bracket extends toward the lever 19 and is pivoted by means of a pin 22 to said lever intermediate its length. By this construction it will be seen that by depressing the treadle 15, the reach rod 14 will draw the extension 12 of the switch arm downward acting through the lever 19 to raise the brake shoe 7 out of engagement with the pulley at the same time that the opposite end of the switch arm 10 makes contact through the proper plugs 9, to cause the motor to be actuated.

In order to vary the movement of the shoe 7 relative to the pulley 6, the free end of the bracket 21 is formed into a lug 23, which lug is adapted to rest upon a stop screw 24 threaded into a lug 25 forming part of the casing 8. It will be understood that raising the screw 24 will swing the bracket 21 on its pivoting bolt 20, thereby lowering the normal position of the brake shoe 7. The

screw 24 is held in adjusted position by a binding nut 26. Due to the loose engagement of the reduced portion 18 in the aperture 16, the bracket 21 may be adjusted 5 without interfering with the connection of the lever 19 with the switch arm 10.

In the modification disclosed in Fig. 4, the bracket 21 may be in the form of a plate 27 forming part of the casing 8, which plate 10 has a vertically-disposed elongated slot 28 extending therethrough, and the pivoting pin 22 of the lever 19 may be adjustably mounted in the slot 28 by means of a jam nut or other suitable pivoting connection, it 15 being understood that the adjustment of the pivoting point 22 in the slot 28 performs the same function as the adjustment of the lever 21 by means of the screw 24.

In order to cushion and limit the movement of the switch arm at both extreme 20 positions of its movement, there is projecting from opposite sides of the switch arm 10 within the casing 8, a pair of transversely-extending wedge-shaped stops 29, 25 one of which stops in each of the limiting positions engaging one of a pair of buffing plates 30 removably affixed to the inside of the casing adjacent the opening through which the switch arm 10 extends.

30 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A pulley brake for motor-controlled apparatus, comprising a casing, a switch 35 arm pivoted intermediate its length to said casing, said arm having an opening extending therethrough, a lever extending at an angle to said arm and having one end loosely positioned in said opening, a brake 40 shoe mounted on the opposite end, a bracket in the form of a lever parallel to said first-mentioned lever and pivoted intermediate its length to said casing, said lever pivoted intermediate its length to one end of said 45 bracket, and an adjusting stop bearing on the free end of said bracket to vary the posi-

tion of the pivoting point of said lever and bracket.

2. In a pulley brake for motor-controlled apparatus, the combination of a switch arm 50 pivoted intermediate its length, said arm having an opening extending therethrough, a lever having one end slidably positioned in said opening and actuated by said switch arm, a brake shoe mounted on the opposite 55 end of said lever, a bracket in the form of a lever and pivoted intermediate its length, said lever pivoted intermediate its length to one end of said bracket, and adjusting means on the free end of said bracket to vary the 60 position of the pivoting point of said lever and bracket.

3. The combination in a motor-controlled apparatus, of a revolving element, a switch arm, a brake lever having a brake shoe at 65 one end adapted to engage said element and having its other end loosely positioned in and actuated by said arm, and means independent of said switch arm for varying the movement of said shoe relative to said ele- 70 ment.

4. The combination of a bracket in the form of a lever, a brake lever pivoted intermediate its length to the end of said bracket, and means engaging the free end of said 75 bracket to vary the position of the pivotal connection between said lever and bracket.

5. The combination of a bracket in the form of a lever, a brake lever pivoted intermediate its length to the end of said 80 bracket, means engaging the free end of said bracket to vary the position of the pivotal connection between said lever and bracket, and means independent of said bracket actuating said brake lever. 85

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAX TAIGMAN.

Witnesses:

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